DOCUMENT RESUME

ED 428 284 CE 078 349

TITLE	Workforce Training Agency Program Evaluations.
INSTITUTION	Washington State Workforce Training and Education Coordinating Board, Olympia.
PUB DATE	1998-00-00
NOTE	53p.; For the 1996 edition, see ED 413 523.
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Employment Patterns; Employment Programs; Followup Studies; Graduate Surveys; *Injuries; Job Training; *Labor Force Development; *Outcomes of Education; Postsecondary Education; Program Effectiveness; *Program Evaluation; Salaries; Secondary Education; State Programs; *Vocational Training Centers
IDENTIFIERS	Job Training Partnership Act 1982; *Washington

ABSTRACT

This report contains program evaluations of Washington state agencies represented on the Workforce Training and Education Coordinating Board: Office of the Superintendent of Public Instruction (OSPI), State Board for Community and Technical Colleges (SBCTC), and Employment Security Department (ESD). OSPI's report uses data from the graduate follow-up study to evaluate postgraduation outcomes of Washington's 1995 and 1996 vocational skills centers graduates. OSPI finds that, during their first year out of high school, skills center graduates were much more likely to work than other students and were less likely to go to college, and those who entered college needed remedial coursework in the basics. SBCTC and the Advisory Council on Adult Basic Education present a joint evaluation on injured workers who exited from college between 1993-96 after attending for vocational preparation. Findings are as follows: most workers are satisfied with the quality of training and related support services; employment outcomes were generally positive; overall employment was lower than typical for college students completing or leaving vocational training; and graduates received higher wages and employment rates. ESD's evaluation of Job Training Partnership Act Titles IIA, IIC, and III examines education and employment outcomes of former participants. It finds that training groups with weaker academic skills are more likely to receive remedial education; those groups with significant work experience and who are less likely to work part time have higher earnings. (YLB)

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ED 428 284

WORKFORCE TRAINING AGENCY PROGRAM EVALUATIONS

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Office of the Superintendent of Public Instruction
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Workforce Training

Program Evaluations

1998

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INTRODUCTION AND EXECUTIVE SUMMARY

Under RCW 28C.18.090, the agencies represented on the Workforce Training and Education Coordinating Board (WTECB) are to conduct biennial program evaluations. These agencies are the Office of the Superintendent of Public Instruction (OSPI), the State Board for Community and Technical Colleges (SBCTC), and the Employment Security Department (ESD). In addition, the Advisory Council on Adult Education is to provide a program evaluation of adult basic skills education. This report presents the second of these evaluations.

OSPI, SBCTC, and ESD conducted their evaluations and wrote up the results. WTECB wrote this introduction and summary and rolled-up the three evaluations into this single report.

These evaluations analyze particular program characteristics and participant results. The research complements "Workforce Training Results" by WTECB. "Workforce Training Results" examines the training system as a whole, while the evaluations reported here provide more detailed information.

The program evaluations and "Workforce Training Results" are pieces of an accountability system for workforce development, "Performance Management for Continuous Improvement" (PMCI). PMCI is a system for setting desired outcomes, measuring results, and continuous improvement in meeting customer needs. Under PMCI, the purpose of the evaluations is to inform policy and program improvements.

In order to create greater consistency between evaluations conducted by different agencies, and as required by statute, WTECB established standards for the program evaluations. The standards for the evaluations include:

1. **Data**—Agency evaluations should use common data elements and definitions developed as part of PMCI.*

2. **Methodology**—Agency evaluations should include the relationship between program characteristics and post-program results for former participants and include measures of program results developed as part of PMCI.

   Agencies should use widely recognized scientific procedures, such as random samples, to ensure the validity and reliability of findings, and common survey questions and data match techniques, as appropriate, for comparability.

3. **Scope**—Agency program evaluation reports should present findings from targeted research on sub-components of programs such as fields of study or particular education or training strategies that are of interest to them.

4. **Frequency**—Agencies should present program evaluations at least every two years.

5. **Use**—The agency evaluations should enable policy improvement. Agency evaluation reports, and operating plans and progress reports, should include information on how the agency has or will use evaluation findings for policy review and program improvement. Operating plans should indicate the program evaluations that are planned for the following year.

6. **Format**—The reports should be written in narrative accessible to a lay audience and include information on: 1) the issue or question studied and the approach used to study the issue; 2) significant findings with supportive evidence; 3) policy implications; and 4) an appendix on methodology and other items as appropriate; e.g., data tables and survey instruments.

   ** Agency program evaluations are not expected to include specific standards such as data definitions or performance measures that were developed after the research design was completed.*

The following are brief descriptions of the three evaluations.

Office of the Superintendent of Public Instruction

OSPI's report relies upon data from the graduate follow-up study to evaluate the post-graduation outcomes of Washington's 1995 and 1996 vocational skills center graduates. The evaluation questions addressed the preparation of students for work or their next educational experience. Specifically: (1) How well prepared are these students for their next educational experience? (2) What proportion of these students go directly to work? and (3) How should we develop our evaluation and information gathering activities so that high quality information is available for teachers, parents and other interested educational audiences?

OSPI finds that during their first year out of high school, skills center graduates are much more likely to work than other students. Approximately two-thirds of graduates were working and not attending school, compared to approximately 25 percent of all graduates in this time period. Skills center graduates earned a median hourly wage of $7.07 which was 34 cents (5 percent) above the hourly salary earned by all students in the class of 1996. Students who completed a vocational training program at a vocational skill center were less likely to go on to college than other graduates from this graduating class. Twenty six percent of skills center graduates went to college compared to 53 percent of all graduates and 49 percent of all vocational completers. Only 1 percent of all skills center graduates who entered college enrolled in a four-year program. These college-bound students needed remedial coursework in the basics as they started their college programs; 47 percent were enrolled in a remedial program during the past year. This can be compared to the 33 percent of all students who were required to take remedial courses in English or math before beginning college level work. The research also indicates the importance of continuing to make improvements in the quality and availability of the student data maintained by school districts to address evaluation questions about vocational students.

State Board for Community and Technical Colleges and the Advisory Council on Adult Education

SBCTC and the Advisory Council on Adult Basic Education present a joint evaluation on injured workers who exited from college between 1993 and 1996 after attending for vocational preparation. All of the students were approved to start formal training by the Department of Labor and Industries (L&I). The study examines: (1) the educational and employment outcomes of a group injured worker students after leaving community and technical colleges betweer 1993-1996 and (2) the appropriateness of using the State Board for Community and Technical College's (SBCTC) Data Linking for Outcomes Assessment system (DLOA) to describe the subset of students.

The evaluation finds that most of the workers are satisfied with the quality of training and the related support services, although about one-third of the workers are dissatisfied with the availability of classes and with advice on course selection. Employment outcomes were also generally positive. Overall employment (66 percent) was lower than typical for college students completing or leaving vocational training; however, it was higher than the findings from a 1992 L&I study of workers who completed a training plan. Wage recovery was 71 percent for college vocational preparatory injured worker students, comparable to the 69 percent in the study. College is particularly valuable for L&I students who graduate. Graduates receive higher wages and employment rates as is true for students in general. Finally, the DLOA proved useful and flexible for analyzing subset student results due to its multi-year spanning capabilities and data on pre-college earnings that can be applied to different subset populations depending upon when it is most reasonable in their employment histories.

Employment Security Department

The Employment Security Department's evaluation of Job Training Partnership Act Titles IIA, IIC and III examines the education and employment outcomes of former participants. The Department finds that training groups with weaker academic skills (youth and disadvantaged adults) are more likely to receive remedial education. Those groups with significant work experience and who are less likely to work part-time (dislocated workers and disadvantaged adults) have higher earnings. All three groups were found to have similar rates of employment. Between 78 and 85 percent of JTPA participants had employment reported for unemployment insurance purposes during the third quarter after they left the program. Some results in this section should be interpreted with caution due to extremely small sample sizes.

Beyond their specific findings, the three evaluations will contribute more broadly toward building a system of accountability. This is the second time these three agencies have simultaneously applied similar research methodologies for the purpose of informing policy and program improvement. These reports will provide valuable information as the workforce training and education agencies continue to create a system that uses evaluative research for continuous improvement. This ongoing effort will build greater data and methodological consistency across agencies, and perhaps most importantly, will lead to greater application of research for the purpose of informing policy and program decisions.

Secondary
Vocational Skills Centers

An Analysis of Graduates from the Classes of 1995 and 1996

1998

Washington State
Office of the Superintendent of Public Instruction

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RESEARCH REPORT

Secondary Vocational Skills Centers

An Analysis of Graduates from the Classes of 1995 and 1996

Jerry Litzenberger Ph.D.

Director, The Graduate Follow-up Study

Executive Summary

This evaluation study used the data collected by a graduate follow-up feasibility study to evaluate the success of the graduates of the classes of 1995 and 1996 who completed vocational training at one of six secondary vocational skills center in Washington State. This study created outcome measures based on student experiences in their first year after high school. The evaluation questions addressed the preparation of students for work or their next educational experience.

The methods used in this study were successful in locating nearly 90 percent of the students in the class of 1995 and 91 percent of the students in the class of 1996 for whom complete information was available. These students were enrolled in a training program at one of six Skills Centers participating in this feasibility study and graduated from their home high school with the Class of 1995 or 1996. More than two thirds (68 percent) of the1995 graduates went directly into the labor market and were employed for pay during their first year after graduation (Figure 1). Another 19 percent of these students were employed and attended a two or four year college during this time period. An additional 1.4 percent of these students enrolled in a two or four year college but did not work in covered employment. The remaining 13 percent were not located in covered employment in the 7 Western States involved in this study nor did they enroll in a college or public technical school in Washington State.

Comparable information is also presented in this chart for students in the class of 1996. The proportion of students who went directly to work dropped slightly to 64 percent. A greater number of students enrolled in a two-year community college for additional training raising the college bound percentage to 26 percent, up nearly 6 percent from the previous year. The remaining 9 percent were not employed in the 4 states participating in this study. They may have worked in another state or simply not yet entered the workforce or a postsecondary educational or training program.

The study also successfully addressed questions about evaluation methodology. While there were limitations to this study based on a lack of complete data, procedures can be put into place during a second year that would address these deficiencies. It is our recommendation to continue to use the graduate follow-up methodology to address evaluation questions about vocational students. The quality of the information will continue to improve as districts become more familiar with the information they need to collect and as trend information becomes available over the next few years.

Evaluation Question Studied

The information collected from the Graduate Follow-up Study described below was analyzed to address evaluation questions that are important in understanding the effectiveness of vocational education for students who complete a course of study at a vocational skill center. These questions were addressed as part of a secondary analysis of the data collected from participating districts in a voluntary feasibility study that has been conducted for the past three years. These questions were:

- How well prepared are these students for their next educational experience?
- What proportion of these students go directly to work?

A third question is particularly important as we consider the type of information necessary to answer the questions about how to successfully prepare students for the working environment of the next century.

- How should we develop our evaluation and information gathering activities so that high quality information is available for teachers, parents and other interested educational audiences?

Description of the Procedures Followed

Past graduate follow-up studies have been based on surveys sent to students from each graduating class. In these surveys students are commonly asked whether they are currently attending college, whether they went directly to work after high school and how successful their high school was in preparing them for this important next step in their life. These studies are characterized by high costs, low rates of return and over-reporting of college attendance. In this study we approached the primary question of how well high schools prepare students for their next step in a quite different way. A student roster was extracted from each district's computerized student record system. A social security number (SSAN) was available in most local school districts and this unique student identifier provided the basis for an electronic match against the student record systems at colleges, universities, and the Employment Security Department.

By joining files from each of these sources for each graduating class, we were able to produce one database with a wealth of information about students next step after high school and, at least initially, how well they did once they got there. For the third year participating school districts were able to supply student data as a fixed or delimited ASCII file in PC compatible format. Although each district has its own student record format, field layouts supplied by each district resulted in information being readily interpreted and easily added to a cumulative database. Recent versions of databases and statistical packages have become very powerful in their search, classification, analysis, and graphical capabilities. These advances play an important role in the thoroughness and economy necessary to analyze the massive amounts of data involved.

Significant Findings

The primary purpose of the Graduate Follow-up Study is to return information to each participating district and high school about the success of the students in each graduating class. By gathering information using the procedures described above, we are able to create a set of quality indicators that will help schools consider how successfully students are prepared for their first educational or work experience after high school. In doing this work we are producing indicators of school quality that are currently being developed at the state and national level. System indicators are being developed for schools in many states as a part of the new assessment system called for in state and national reform initiatives. The Graduate Follow-up Study is one attempt to develop indicators of school quality and reinforces the work being done at the school, district, and state level in Washington and in other states across the nation.

Presented below is a set of the preliminary indicators for the 1,531 students in the class of 1995 and 2,042 students in the class of 1996 reported as vocational completers from the Vocational Skills Centers participating in our voluntary feasibility study. These students comprise about 7 percent of the graduates from volunteering districts that participated in our feasibility study.

Results

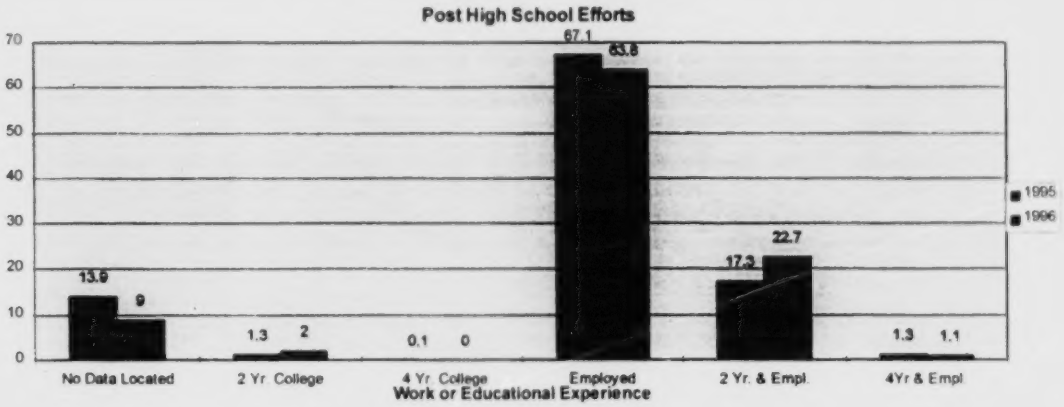
Figure 1 presents a graphic that describes the post high school experience of students during their first year out of high school. It is from this information that we begin to create quality measures for schools as well as provide accurate information about how successful our programs and practices are in preparing these students. Some examples:

- We were able to locate 87 percent of the 1995 vocational completers from Skills Centers who supplied a social security number. For the class of 1995, the percentage of students we were able to locate increased to 91 percent. As we develop reciprocal agreements with employment agencies, colleges, and universities in other states this percentage will increase. Many of these students have engaged in more than one activity during their first year after graduation. Our challenge is to develop reporting systems and indicators than adequately describe the complex paths students follow into their careers.

- Figure 1 provides a graphic display of our student sample. This represents our best estimate of percentages of students in each category. About 68 percent of the students who graduated in the class of 1995 and were classified as vocational completers were employed only during their first year out of high school. This compares to 26 percent of all students in our high school sample. This proportion declined by four percentage points for the class of 1996 due to a higher enrollment in college level programs.

- Figure 1 also presents information about students who went to college at a four-year university, a community or technical college in Washington State. Nearly 20 percent of vocational students from the 1995 class and over 26 percent of the 1996 graduates went to a community or technical college during their first year after graduation.

Figure 1
Post High School Experience
Vocational Skills Center Graduates



*Military is 1 percent (15 students)

An Equity Perspective

Table 1 presents information comparable to the indicators above for students from each racial/ethnic group. Asian and Black students are over-represented in the No Data Located category, perhaps indicating that students from this group are not entering the job market or further education or training as often as are students from other racial/ethnic groups.

Table 1

Post HS Category	Asian	Black	Hisp.	Native	White	Total
No Data Located	19%	22	8	7	8	9
Attend 2yr Coll.	3		2	5	2	2
Employed	49	58	64	63	65	64
2yr & Empl.	29	17	22	26	23	23
4yr & Empl.		3	3		1	1
2yr, 4yr & Empl.					.2	.2
Military					.7	.6
Empl & Military			1		.5	.5

Students from this group are also underrepresented in the employed category although Asian students are attending college in the highest proportion of any of the comparison groups.

A second equity perspective is available when comparisons are made between the post high school experiences of male and female graduates. Table 2 presents information for these two grouping of graduates for the class of 1996. Females were slightly less likely to be located and if located less likely to be employed only than were male graduates. Females were more likely to be enrolled in a community college program.

Table 2

Post HS Category	*Female*	*Male*	*Total*
No Data Located	**11**	**8**	**9**
Attend 2yr Coll.	**2**	**2**	**2**
Employed	**60**	**68**	**64**
2yr & Empl.	**26**	**20**	**23**
4yr & Empl.	**1**	**1**	**1**
2yr, 4yr & Empl.		**.4**	**.2**
Military	**.4**	**.9**	**.6**
Empl & Military		**1.1**	**.5**

College Bound Students

Some additional information was available for college bound students. Among the key findings were:

- Students who completed a vocational training program at a vocational skills center were less likely to go on to college than other graduates from this graduating class. Twenty six percent of skills center graduates went to college compared to fifty-three percent of all graduates and forty-nine percent of all vocational completers.

- Nearly all of these students enrolled in a community college program with just 1 percent enrolled in a four year program during their first year after graduation.

- These students needed remedial coursework in the basics as they started their college programs. Forty seven percent of skills center graduates were enrolled in a remedial program during the past year. This can be compared to the 33 percent of all students and 41 percent of all vocational completers who were required to take remedial courses in English or math before beginning college level work.

Wage information

A primary goal of this follow-up study has been to gather information about the wages and types of jobs of recent graduates. Table 3 presents information for students from each completer area. The median wage is probable the best indicator of the wages earned by recent graduates. Maximum wages can be impacted by bonuses paid in a single quarter that were accumulated over a full year and by accumulated commissions. These information systems also have some error that we will deal with by adopting common data management standards in cooperation with other agencies conducting similar work. The hourly wages earned ranged from $8.07 for students completing 'Other Programs' to $6.18 for students completing Home Economics. The median salary of $7.07 is 34 cents (5 percent) above the hourly salary earned by all students in the class of 1996 and 24 cents per hour above other vocational graduates.

HS CIP Area	*Median Wage*	*Minimum*	*Maximum*
Agriculture	$6.71	5.29	33.46
Business	7.13	4.18	18.47
Health Occ.	7.04	4.52	82.36
Home Econ.	6.18	4.47	13.13
Marketing	7.08	4.90	21.05
Other Prog.	8.07	5.36	13.15
Trade & Indus.	7.10	4.23	79.02
Group Total	7.07	4.18	82.36

Table 3

Summary and Conclusions

The information presented in this paper represents the current state of the art in determining how well the graduates of Vocational Skills Centers are prepared for their next career step after graduation. Good information is available from this feasibility study for staff at each Skill Center and for external audiences who are working to determine the impact of these programs on the students they serve. However, this study represents only the beginning of our ability to provide research quality management information as this feasibility study expands.

As we improve the quality of information gathered from Skills Centers, from employers, and from post high school training experiences, we will increase the utility of the information as a tool to improve the programs and practices delivered to students in Vocational Skills Centers. This research methodology has the potential to determine the net impact of this educational alternative on the income of graduates for up to five years after the completion of their training. In the next decade we will deliver the kinds of research answers to questions about program effectiveness that has long been asked but rarely answered.

Job Skills Enhancement

Educational and Employment Outcomes for Injured Workers After Vocational Training

1998

Washington State
State Board for Community and Technical Colleges

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DRAFT

State Board for Community and Technical Colleges

Educational and Employment Outcomes for Injured Workers After Vocational Training

1993-96

Background

The purposes of this study are twofold:

- To learn about the educational and employment outcomes of a group injured worker students after leaving community and technical colleges between 1993-1996.

- To evaluate the appropriateness of using the State Board for Community and Technical College's (SBCTC) Data Linking for Outcomes Assessment Outcomes system (DLOA) to describe the subset of students.

The study describes the demographic characteristics and educational and employment outcomes for 1,200 injured workers who exited from college between 1993 and 1996 after attending for vocational preparation. All of the students were approved to start formal training by the Department of Labor and Industries (L&I). Injured workers with formal plans are often the most difficult cases for a successful return to work. A 1992 L&I survey for workers who completed a plan found that four to six months after completing a plan, less than half of the claimants were employed (46 percent). Their average wage recovery was a little more than two-thirds (69 percent) of pre-injury wages. DLOA results are compared to the 1992 survey findings and to results for college vocational preparatory students as a whole.

Key Findings:

- Between 1993 and 1996, 3,047 injured worker students enrolled in community and technical colleges. They represented the majority of the injured workers (58 percent) approved to start a formal plan by Labor and Industries during that period. The other workers typically had plans for on-the-job training, job search, or self-employment.

- As of spring 1996, 1,200 of the 3,047 injured workers (39 percent) had exited from college after attending for vocational preparation in a certificate or degree program. The other 1,847 were still enrolled in 1996-97, or exited other programs.

- The typical exiting student who attended for vocational preparation was male (78 percent), older (just under 40 years median age) and had never before attended college (67 percent). Nearly a quarter (24 percent) of all students with disability exiting from vocational training were L&I clients in this study. Forty-seven (47) percent of injured workers in the study identified themselves as disabled at time of enrollment in college.

- About half of all students exiting vocational preparation programs earned a certificate or degree and half left before graduating. Forty-four (44) percent of the exiting L&I students graduated. Eighty (80) percent of L&I graduates completed certificates and twenty percent degrees, a distinctly different pattern than students as a whole who graduated programs (fifty-one percent degrees, forty-nine percent certificates).

- Fifty-six (56) percent of the students left after taking some college, but before graduating. The typical student leaving without a certificate or degree enrolled for 52 credits, slightly more than one year.

- The overall employment rate for injured workers exiting college was 66 percent 6 to 9 months after leaving college. This was lower than the average vocational preparatory student employment rate. The percent of wages recovered was 71 percent.

- Employment rates were lower for both L&I graduates (76 percent) and leavers (58 percent) than for students typically (83 percent for graduates and 77 percent for leavers). This finding was the same when students with similar prior levels of education were compared.

- The median hourly wage for L&I graduates adjusted for 1997 dollars was higher ($10.82/hr) than for graduates ($10.65). The median wage for L&I students who left before earning a degree was $10.06/hr compared to $9.72 for all leavers.

- The Data Linking for Outcomes System (DLOA) proved useful for identifying subset results that were attainable by analyzing a three year exiting span of vocational preparatory students and comparing them to results for students as a whole who exited in this period. DLOA's flexibility was also evident for identifying pre-college median hourly wage for L&I students using their 11th quarter pre-college UI data as the quarter most likely to contain pre-injury wages.

- One limitation to using DLOA was for basic skills students attending for work-related reasons for whom there weren't sufficient exiting cohorts in the DLOA to construct a multi-year span. Finally, another limitation was for L&I students attending for skills upgrading. These students were not contained in the DLOA.

Conclusion

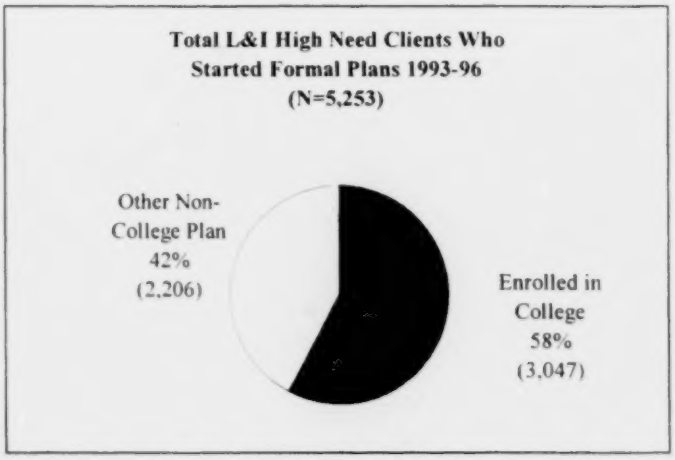
The overall finding of the study is that college training pays. Overall employment (66 percent) was lower than typical for college students completing or leaving vocational training, however, it was higher than the 1992 L&I study. Wage recovery was 71 percent for college vocational preparatory injured worker students, comparable to the 69 percent in the study. College particularly pays for L&I students who graduate. Graduates get higher wages and employment rates as is true for students in general.

Also there was a sizeable portion of disabled students in vocational programs suggesting important coordination in that regards. However, most did not report a disability and may not have gotten any special assistance from colleges.

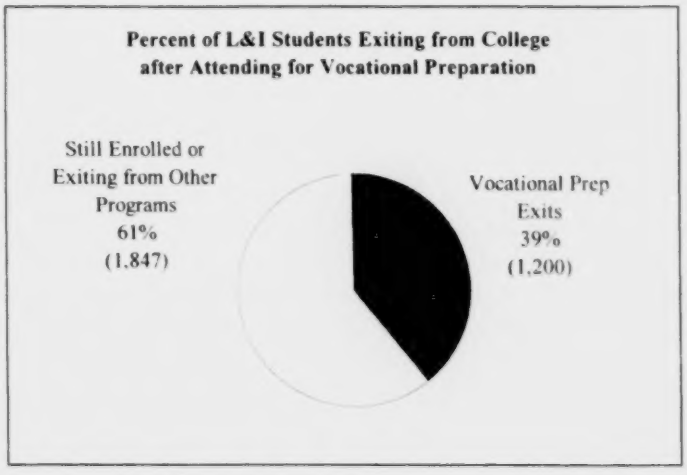
Finally, the DLOA proved useful and flexible for analyzing subset student results due to its multi-year spanning capabilities and data on pre-college earnings that can be applied to different subset populations depending upon when it is most reasonable in their employment histories.

Analysis of Findings

Percent of L&I Claimants With formal Plans Enrolled in Community and Technical Colleges: Between 1993 and 1996, 3,047 injured worker students enrolled in community and technical colleges. They represented the majority of the injured workers (58 percent) approved to start a formal plan by Labor and Industries during the period. In addition to going to college, other plan strategies include on-the-job training and job placement services, or were self-employed.

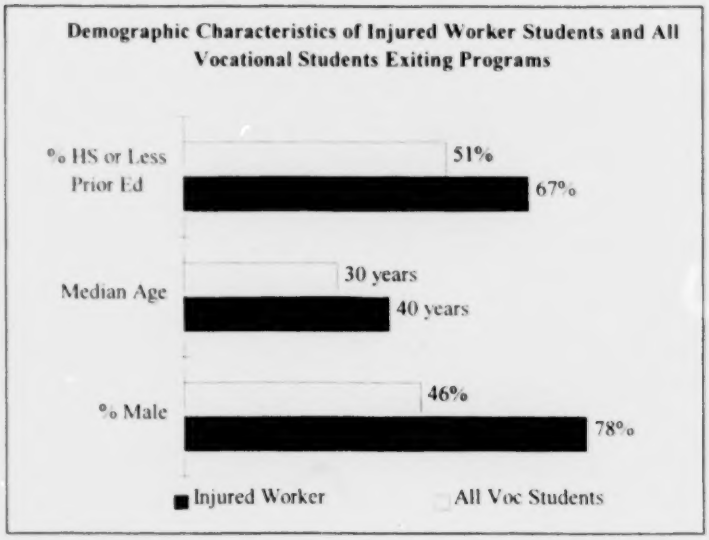

Total L&I High Need Clients Who Started Formal Plans 1993-96 (N=5,253)
Other Non-College Plan 42% (2,206)
Enrolled in College 58% (3,047)

Percent of L&I Students Exiting from Colleges after Attending for Vocational Preparation: As of spring 1996, 1,200 of the 3,047 L&I students (39 percent) exited from college after attending for vocational preparation. A multi-year span of exiting vocational students was used to identify this group. The other 1,847 L&I college-going workers were still enrolled in colleges, or left college after shorter skills upgrading or basic skills related to work and were not identifiable in the DLOA for a multi-year span sufficient to provide an exiting cohort.

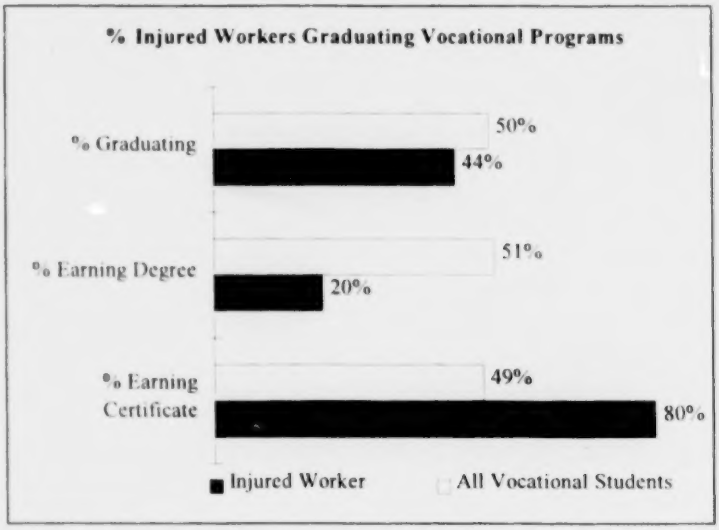

Percent of L&I Students Exiting from College after Attending for Vocational Preparation
Still Enrolled or Exiting from Other Programs 61% (1,847)
Vocational Prep Exits 39% (1,200)

Demographic Characteristics of Injured Worker Students: The typical injured worker student in the study was male, older and attending college for the first time.

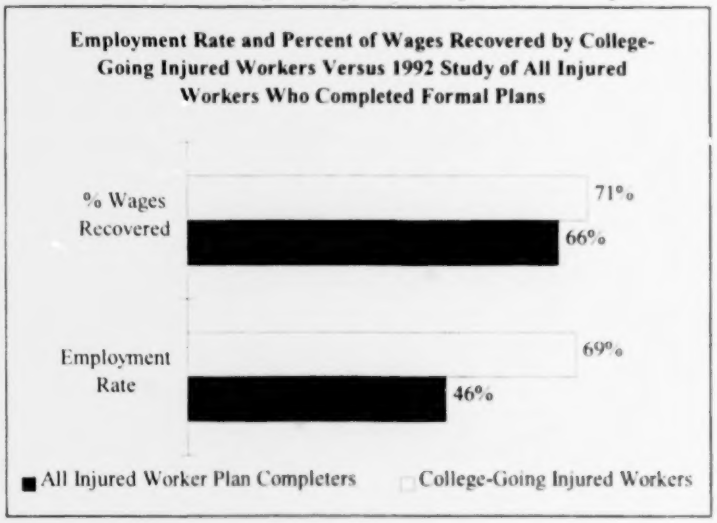
Forty-seven (47) percent of the injured worker students in the study identified themselves as disabled at time of enrollment and they comprised nearly a quarter of all students with disability exiting from vocational training were injured worker students in the study.



Percent of Injured Worker Students Graduating: Injured worker students were less likely than vocational students as a whole to graduate (44 percent compared to 50 percent). Of those graduating, they were also more likely to earn a certificate (80 percent) than a degree (earned by 51 percent of vocational graduates as a whole). The typical injured worker student leaving without a degree or certificate enrolled for 52 credits, slightly more than one year.



Overall Employment and Wage Recovery Rates For College-Going L&I Claimants: The overall rate of employment six to nine months after leaving college was 66 percent for injured worker students who attended for vocational preparation. The percent of wages recovered was 71 percent. Wage recovery was based upon median hourly wages three quarters after college and 11 quarters before. A 1992 survey conducted by L&I of all of its injured worker claimants who had completed a formal return-to-work plan found that less than half (46 percent) were working four to six months after their plan completion and the average wage recovery was 69 percent. The L&I survey respondents included claimants who had attended college as part of their plan as well as those who did not.


Employment Rate and Percent of Wages Recovered by College-Going Injured Workers Versus 1992 Study of All Injured Workers Who Completed Formal Plans
% Wages Recovered
71%
66%
Employment Rate
69%
46%
All Injured Worker Plan Completers
College-Going Injured Workers

Employment Rates and Median Hourly Wages for L&I Graduates and Leavers Compared to Vocational Preparatory Students as a Whole: Employment rates for L&I students six to nine months after college were less than employment rates for all vocational students, both for graduates and students who had some college, but left before earning a degree or certificate. Wage rates adjusted to 1997 dollars were higher, however, for both L&I graduates and leavers. Graduates had substantially higher employment rates and higher wage rates as was true for students in general.

	% Employed	Median Hourly Wage
L&I Graduate	76%	$10.82
L&I Leaver	58%	$10.06
All Vocational Graduates	83%	$10.65
All Vocational Leavers	76%	$9.72

Use of the Data Linking for Outcomes System: Overall the DLOA proved useful and flexible. Areas in which it demonstrated this were:

- Putting together a multi-year exiting cohort span for L&I students.
- Estimating pre-college earnings for L&I students by identifying a likely pre-injury earnings quarter.

The system was limited in these areas:

- For basic skills students for whom a multi-year span was not available;
- Outcomes data or students who indicated their purpose for attending was upgrading their skills.

Conclusion

The overall finding of the study is that college training pays for the L&I injured workers by increasing employment with the same wage recovery compared to the 1992 L&I study. The payoff is higher for L&I students who graduate, as is true for students in general.

Also there was a sizeable portion of disabled students in vocational programs suggesting important coordination in that regards. However, most did not report a disability and are not getting any special assistance from colleges.

Finally, the DLOA proved useful and flexible for analyzing subset student results due to its multi-year spanning capabilities and data on pre-college earnings that can be applied to different subset populations depending upon when it is most reasonable in their employment histories.

Job Training Partnership Act

Impacts of Job Training Partnership Act (JTPA) and College Training on JTPA Participants

1998

Washington State
Employment Security Department

Impacts of Job Training Partnership Act (JTPA) and College Training on JTPA Participants

State of Washington
Employment Security Department
Labor Market and Economic Analysis

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Executive Summary

Impact of JTPA and College Training on JTPA Participants

Background:

The purpose of this paper is to uncover a number of apparent missing JTPA participants who were reported as enrolled in a Community or Technical College by JTPA, but who did not show up in earlier reports that were based on data from the colleges. Since training is the essence of the JTPA program, and since the Community and Technical colleges are by far the largest source of occupational skills training, a high number of referrals from JTPA to the colleges should be encountered. And referrals should be even higher because the colleges are also a large source of remedial education services.

Once we could establish that we had accounted for all the referrals to training, we then asked how these populations fared in subsequent employment. In looking at the results, we separated out three JTPA programs for analysis.

- JTPA Title IIA serves disadvantaged adults (people who are low income and have some barrier to employment).
- Title IIC serves disadvantaged youth, similar to the adults, but aged 14 through 21.
- Title III serves dislocated workers, who typically need employment because of a plant closure or a downturn in the industry in which they were working.

Our strategy was to look at people who terminated from these programs in Program Year 1995 (July 1, 1995-June 30, 1996). Because JTPA provides a variety of services over an extended period of time, we looked at the Community and Technical College data going back to 1989. In the course of our analysis, we discovered periods of college attendance that were prior to JTPA and that followed JTPA. This gave us another variable to look at as we analyzed what happened to this population.

In fact, because of the many complex patterns of school attendance coupled with or separated from JTPA participation, we decided to look only at three groups:

- Those whose college experience was incurred only prior to JTPA.
- Those whose college experience was only during JTPA.
- Those that had college only after JTPA.

In looking at these findings, as with all research, there are several cautions that need to be considered:

1. There are several reasons for sending someone to college. As noted above, there were a number of individuals who took adult basic education or English-as-a-second language. They may have done this alone, or in concert with occupational skills training. Although this makes interpretation more difficult, the integration of these services is a distinct advantage to this population.
2. To get to the three groups we used in our analysis, we had to eliminate a large number of cases. For example, we dropped from 3,199 down to 745 cases in the Title IIA program, primarily for lack of wage follow-up data. Although this enabled us to draw the distinctions between the groups more clearly, it leaves us with a problem in that we have tables with small numbers, which limits our ability to interpret or generalize from these results.
3. Data from the colleges on the nature of the training received was based on the college applicant's report of their intent at the time they enrolled. This does not correlate as well as we had hoped with the reason the JTPA program made their referral.
4. Since this research looked only at Community and Technical Colleges, those who went to a private vocational school would be recorded here as receiving no college training. There are other forms of training that may or may not involve classroom training at a college, such as on-the-job training. The fact that some people received college training not acknowledged in the JTPA data probably reflects referrals for one or two classes, which simply did not get reflected in the JTPA data.
5. The median wage of all program terminators who had secured an employment was used to report income.
6. The use of the phrase "Employment Rate" is a reference to the percentage of individuals found in covered employment.

Summary of Findings by Program:

Title IIA, Disadvantaged Adults

About half of this population attended a Community or Technical College. However, once we reduced our sample to the three groups described above, that percentage dropped a bit to 44 percent. The overall employment rate 6 to 9 months after the program was high, at 85 percent. And the surprise is that neither the type of training nor the source (whether or not the training was provided by the colleges) seemed to matter much. There is some reason for satisfaction in the fact that the individuals having the most intensive services (the row labeled OES/JSA plus 2 or more other training) did very well in terms of both employment and earnings. The satisfaction comes not so much in their relative wages and employment as in the fact that this was a group that needed additional help, and profited from receiving it.

Title IIC, Disadvantaged Youth

As might be expected of a younger population, the percent attending college (15 percent) is much lower. This is true even though just over half (51 percent) received remedial education. Thus, unlike the adults, this population tends to receive remedial education (which includes GED preparation) elsewhere, such as at an alternative high school. Median earnings were low because many students were working part-time, while continuing in school.

Title III, Dislocated Workers

This population represents the other end of the spectrum from the youth. They all have prior work experience, which in some cases is substantial, and they have a relatively low need for remedial education. In keeping with this, their outcomes are much better in terms of median earnings. It is a clear indication of how different this population is from the others that even this much higher earnings does not match their prior earnings.

Contrary to the experience of the disadvantaged adults, in this group the type of training did seem to matter. And, again, there is some encouragement in the fact that there was a significant amount of difference in the results for those who received remedial education alone, compared to those that received remedial education in combination with skills training. The difference in earnings (going from $4,676 per quarter to $9,076) and employment (going from 72 percent to 83 percent) was substantial.

Summary Table:

TOTALS

JTPA Title	% in college[1]	%in training[2]	%employed[3]	Median. Earn.[3]
IIA	52%	78%	85%	$3,335
IIC	24%	89%	83%	$1,282
III	51%	72%	78%	$6,319

1 Based on totals from Table 1, not on the sample data
2 As reported in the JTPA SPIR system
3 Based on sample data from tables 2,7,12

Project Description:

This study investigated the impact of JTPA and other training on program participants for PY 1995, July 1, 1995 to June 30, 1996. The focal point of the study was a cross-match between training received at JTPA and those received at the community colleges (CC). Furthermore, the timing of the training in relation to initiation and termination of JTPA was of particular interest.

Policy Implications:

Based on previous research, the Washington State Job Training Coordinating Council established a goal to increase the training activity of JTPA participants by 5 percent. This research confirms the appropriateness of this decision, including the decision to include both classroom training and work-based training for disadvantaged adults. This is reflected in the similarity of the post-program results for employment and earnings of the different types of training.

The research confirms that while many participants get training in JTPA, the emphasis in Title II programs is on short term training designed to get people employed relatively quickly. As a result, there are fewer JTPA participants in the Community College database, which focuses on completers or graduates. The emphasis on short-term training is also evidenced by the substantial amount of training that takes place somewhere other than a Community or Technical College.

Because Title III serves a substantially different population, it provides us with a broader perspective on the advantages of training. In the case of the dislocated worker, who is much closer to the norm of the American worker, there is a clear advantage to more intensive training. The advantage of classroom training is clearly evident in the improved earnings of the college attendees.

Methodology:

Three data sets were used: 1) the SPIR data, 2) the CC data, and 3) wages & employment data. In order to isolate the populations of participants by their times of training eight different populations were identified (Figure 1).

Our JTPA population of 40,073, of which 28,282 attended college, is the result of three program years (1994-1996). This study looked at the JTPA participants of PY 95 since this period was the only complete data in relation to the outcome measures of earnings and employment for both populations of college participants and those that did not attend

college. The populations of the participants that terminated their JTPA training in PY 95 are presented in Table 1. This table identifies the number of participants by their (Service Delivery Areas) SDA using three general groupings. Those participants that at one time or another received funding from JTPA to attend college are identified as "Concurrent." This group includes groups 2-5 from Figure 1. The next group is identified as "No College;" these individuals did not have a record at public college. And finally the "Other 3" group which includes the other three populations 1, 6 and 7 (Figure 1).

In this study we used participants with the following characteristics:

- Individuals were identified by their first *Title of participation only.[4]
- Those that received more than assessment only from JTPA.
- Those that their participation was either 'Before Only,' 'During Only,' 'After Only,' or 'No College.'

'Before only' group had already experienced college before coming to JTPA (Figure 1), 'During only' group was introduced to CCs and completed their training while enrolled at JTPA, and 'After only' group followed their JTPA training with more college education.

Findings by Titles:

The three titles are formed of sub-categories. Title IIA, also referred to as economically disadvantaged adults, include the following sub-categories: Title 1 in SPIR data, which is also refereed to as 2a (adult), title 2 in SPIR data also known as 2m (older workers) and title 7=2h (hard to serve adults-5 percent exempt). Title IIC, also referred to as economically disadvantaged youths, includes titles 3 (youth) & 8=2i (hard to serve youth-5 percent exempt). Finally Title III, also referred to as dislocated worker, includes titles 4=3s (Governor's Reserve), 5=3f (Substate Grantee) and 6 (National Reserve).

Title IIA: This population was made of 745 individuals where the majority were female (57 percent). The non-Whites formed 35 percent and 36 percent lacked significant work experience. Those with limited knowledge of English formed 10 percent of the population and the average age was 36 with the oldest reaching 73 years of age.

Table 2 further identifies this population using a cross-match of training. In each cell the (N) represents the whole population while the median is calculated on the employed portion of the N. This is more clarified if one looks at the percent employed ratio of each cell which identifies the number of individuals without a wage record (unemployed).

[4] * Title refers to three titles of IIA (1 2 & 7), IIC (3 & 8) and III (4, 5 & 6).

- Combination of 'Occupational Skills' with 'Other' training produced the most successful outcome of highest median quarterly income with 100 percent employment.
- Receiving more training at JTPA was also very successful at combination of 'OES/JSA plus 2' or more other training's 'with 'Basic Skills.'
- Over half of the population (56 percent) did not attend college at all but had 84 percent employment ratio.
- Overall, 85 percent of the population were employed three-quarters after termination of JTPA.

In order to compare the impact of concurrent training 'During only,' with 'Before, After and No-College' Tables 3 and 4 are presented.

- Overall median income of those who only received JTPA training ('No college' population) was higher than the before or after groups.
- Among the 'During Only' population those who received 'Occupational Skills' from JTPA and 'Other' training from CCs showed the highest success in having 100 percent employment with the highest median income.
- For those who did not attend college the 'On-the-job training' of JTPA program had the highest number of participants.

Specific cells and the total populations of 'During only' and the '3 combined groups' are used to identify the characteristics of the population. This information is summarized in Tables 5 and 6.

To better understand the impact of training on employment and income a comparison was made between the 'During only' and the 'No college' populations. While 87 percent of the 'During only' population found employment their recovery ratio (reaching or exceeding income levels of pre-training period) was less impressive (75 percent). Similar results were noticed in 'No college' population with employment ratio of 82 percent and recovery rate of only 72 percent.

Title IIC: There were total of 686 youth that used this title. The population was almost divided in half by gender (53 percent female) with 37 percent forming all the non-White races. As expected a large percentage (77 percent) lacked significant work experience but only 5 percent had limited knowledge of English. The average age was 18. Those who received 'Basic Skills' training from JTPA formed little more than half (51 percent) of the population with all other services combined forming the rest (49 percent).

Table 7 shows the distribution of the Title IIC by the types of trainings.

- The level of income as expected was much less than the other two Titles.
- Overall, 83 percent of the population were employed three-quarters after termination of JTPA.
- The number of youth that did not attend college was large (85 percent). Although they had 84 percent employment ratio, a future study on these youth could be beneficial. A follow up that reflects the impact of early termination of education correlating with appearing in high percentages in other government programs would be important.

In order to compare the impact of 'During only', with 'Before, After and No College' groups Tables 8 and 9 are presented.

- Only 8 percent of the population received training at the CC's concurrent with their JTPA training. The majority choose 'Basic Skills Training' from JTPA and 'Workforce' training from the CCs.
- There was a higher rate of employment for those who received their training at JTPA alone (84 percent).
- Attending college increased the median income but showed a reduction in the employment rate.

Specific cells and the total population are used to identify the characteristics of the youth population. This information is summarized in Tables 10 and 11.

Title III: A total of 2,425 individuals used this title. The population was mostly male, 67 percent, with only 14 percent forming all of the non-White races. As expected almost 100 percent of the population had work experience but only 1 percent had limited knowledge of English. The average age was 41 and majority of the participants, 51 percent, received 'Occupational Skills' at JTPA.

Table 12 shows the distribution of the Title III by the types of training.

- The combination of training that produced the highest median income was "Basic & Occupational Skills' with 'Transfer' training.
- Overall 78 percent of the population were employed three-quarters after termination of JTPA.
- The range of quarterly income was rather large (from 0 to over $10,535).
- Here also over half of the population (51 percent) choose not to attend college, but maintained a rather high median income of $6,359 and 75 percent employment rate.

In order to compare the impact of concurrent training 'During only,' with 'No College' or other groups Tables 13 and 14 are presented.

- The majority (89 percent) of the concurrent population choose 'Workforce training' while in college.
- Of those who did not attend college 'No College' the largest division (58 percent) received 'Basic Readjustment only.'
- Concurrent participation seems to be more productive (Median income of $6,443 and employment rate of 82 percent) than receiving training at colleges before or after JTPA.

Further characteristics of specific cells and the total populations are summarized in Tables 15 and 16.

To better understand the impact of training on employment and income a comparison was made between the 'During only' and the 'No college' populations. While 82 percent of the 'During only' population found employment three-quarters after JTPA, their recovery ratio was much less (41 percent). Comparable results were noticed in 'No college' population with employment ratio of 75 percent and recovery rate of only 39 percent. The overall recovery of wages was 40 percent. In other words, the number of participants whose income reached the same level or exceeded the income level of three-quarters before JTPA when compared to three-quarters after JTPA was 957. The importance of attending college while in JTPA is noticed when comparing this population's wages with the other groups.

Figure 1. Participants grouping by their time of training at JTPA & colleges.

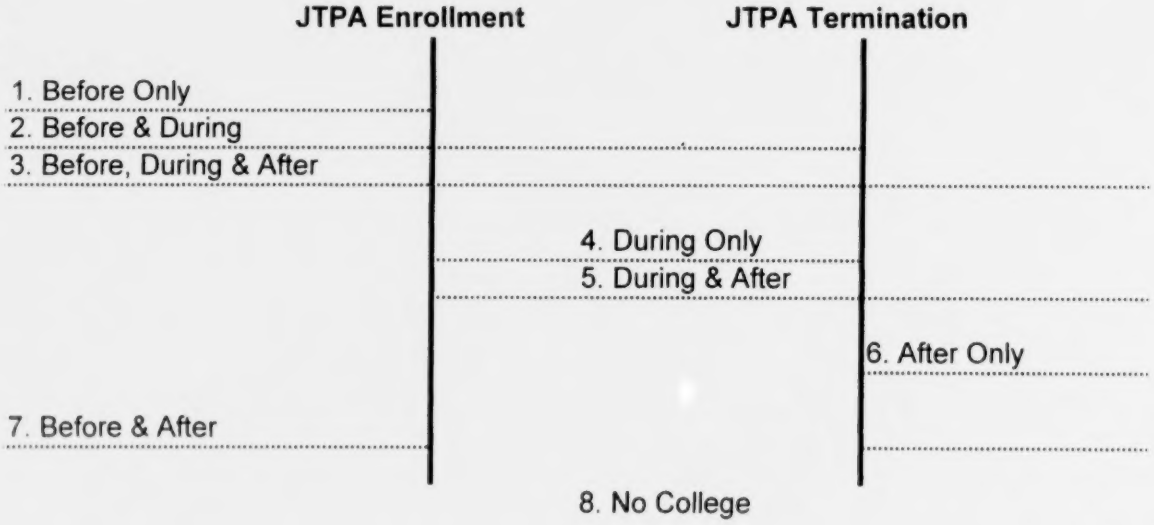

Table 1. Distribution of the JTPA participants in PY 95 by SDAs for two groups of college attendance and no-college (no).									
SDA	Title	Other 3	%	No	%	Concurrent	%	Total	%
53010 - I	IIa	61	33%	49	26%	76	41%	186	100%
	IIc	32	23%	65	46%	43	31%	140	100%
	III	40	24%	45	27%	79	48%	164	100%
53015 - II	IIa	72	27%	54	20%	144	53%	270	100%
	IIc	48	25%	108	57%	33	17%	189	100%
	III	59	22%	60	22%	149	56%	268	100%
53020 - III	IIa	26	15%	25	15%	118	70%	169	100%
	IIc	21	18%	31	26%	67	56%	119	100%
	III	17	12%	22	16%	99	72%	138	100%
53030 - IV	IIa	34	14%	33	14%	174	72%	241	100%
	IIc	50	27%	127	69%	8	4%	185	100%
	III	16	9%	24	13%	145	78%	185	100%
53025 - V	IIa	142	18%	202	26%	439	56%	783	100%
	IIc	96	32%	136	45%	67	22%	299	100%
	III	246	23%	315	29%	507	47%	1068	100%
53040 - VI	IIa	68	25%	64	24%	135	51%	267	100%
	IIc	75	32%	88	38%	69	30%	232	100%
	III	21	11%	38	19%	136	70%	195	100%
53005 - VII	IIa	95	30%	69	22%	156	49%	320	100%
	IIc	43	26%	89	54%	32	20%	164	100%
	III	36	19%	56	30%	95	51%	187	100%
53045 - VIII	IIa	74	23%	90	28%	155	49%	319	100%
	IIc	66	28%	98	42%	72	31%	236	100%
	III	34	34%	26	26%	39	39%	99	100%
53050 - IX	IIa	31	21%	33	22%	83	56%	147	100%
	IIc	47	27%	78	45%	47	27%	172	100%
	III	22	22%	44	45%	32	33%	98	100%
53070 - X	IIa	29	27%	29	27%	49	46%	107	100%
	IIc	22	21%	48	45%	37	35%	107	100%
	III	29	23%	37	30%	58	47%	124	100%
53065 - XI	IIa	70	43%	31	19%	61	38%	162	100%
	IIc	21	24%	56	63%	12	13%	89	100%
	III	39	25%	49	32%	65	42%	153	100%
53035 - XII	IIa	98	43%	59	26%	71	31%	228	100%
	IIc	38	33%	68	59%	9	8%	115	100%
	III	70	32%	64	29%	84	39%	218	100%
Older Worker	IIa	40	17%	59	25%	138	58%	237	100%
Governor's Reserve	III	86	15%	143	25%	337	60%	566	100%
National Reserve	IIa	0	0%	0	0%	2	100%	2	100%
National Reserve	III	320	13%	401	17%	1662	70%	2383	100%
All SDAs	IIa	800	25%	738	23%	1661	52%	3199	100%
	IIc	559	27%	992	48%	496	24%	2047	100%
	III	629	22%	780	27%	1488	51%	2897	100%
Other Programs		446	14%	603	19%	2139	67%	3188	100%
All Total		2434	21%	3113	27%	5784	51%	11331	100%

Table 2. A cross-match of JTPA & college Training for Title IIa.

	College Trainings						
JTPA Training	Basic Skills	Transfer	Workforce	Other	No College	Row Total	
Basic Skills	7	0	11	0	32	50	N*
	$2,274	$0	$2,564	$0	$3,177	$2,862	$**
	100%	0	91%	0	88%	90%	%***
Occupational Skills	11	6	104	12	126	259	N*
	$3,161	$2,604	$2,849	$4,907	$3,638	$3,386	$**
	73%	83%	90%	100%	76%	83%	%***
On-the-job Training	7	5	39	2	166	219	N*
	$3,390	$3,853	$2,804	$2,752	$3,710	$3,581	$**
	71%	100%	82%	100%	84%	84%	%***
OES/JSA	6	3	12	0	14	35	N*
	$2,444	$1,514	$2,312	$0	$3,329	$2,798	$**
	67%	67%	83%	0	86%	80%	%***
OES/JSA plus 2 or more other trainings	8	4	78	11	81	182	N*
	$3,383	$2,242	$2,990	$3,920	$3,428	$3,201	$**
	100%	100%	82%	82%	94%	88%	%***
Column Total	39	18	244	25	419	745	N*
	$3,141	$2,709	$2,853	$3,920	$3,581	$3,335	$**
	82%	89%	86%	92%	84%	85%	%***

*N = number

**$ = Median earnings adjusted to 1997 Dollars, based on employed population only.

***% = Percent employed

Table 3. Cross-match of concurrent JTPA & community college Training.

	College Trainings					
JTPA Trainings	Basic Skills	Transfer	Workforce	Other	Row Total	
Basic Skills	6	0	8	0	14	N*
	$2,537	$0	$2,777	$0	$2,704	$**
	100%	0	100%	0	100%	%***
Occupational Skills	2	4	87	12	105	N*
	$1,713	$1,927	$2,763	$4,907	$2,966	$**
	100%	75%	90%	100%	90%	%***
On-the-job Training	1	0	17	0	18	N*
	$1,046	$0	$2,425	$0	$2,421	$**
	100%	0%	88%	0%	89%	%***
OES/JSA	5	2	10	0	17	N*
	$1,704	$2,814	$2,882	$0	$2,710	$**
	60%	50%	80%	0	71%	%***
OES/JSA plus 2 or more other Trainings	8	3	69	10	90	N*
	$3,383	$2,424	$3,430	$4,049	$3,458	$**
	100%	100%	83%	80%	84%	%***
Column Total	22	9	191	22	244	N*
	$2,588	$2,424	$2,910	$4,232	$3,058	$**
	91%	78%	87%	91%	87%	%***

Table 4. Cross-match of JTPA & college Training for 3 groups of 'Before only', 'After only' and 'No college'.

	College Trainings						
JTPA Trainings	Basic Skills	Transfer	Workforce	Other	No College	Row Total	
Basic Skills	1	0	3	0	32	36	N*
	$1,294	$0	$1,375	$0	$3,177	$2,992	$**
	100%	0	67%	0	88%	86%	%***
Occupational Skills	9	2	17	0	126	154	N*
	$3,730	$3,024	$3,595	$0	$3,638	$3,585	$**
	67%	100%	94%	0%	76%	78%	%***
On-the-job Training	6	5	22	2	166	201	N*
	$3,949	$3,853	$2,981	$2,752	$3,710	$3,642	$**
	67%	100%	77%	100%	84%	83%	%***
OES/JSA	1	1	2	0	14	18	N*
	$3,184	$215	$937	$0	$3,329	$2,983	$**
	100%	100%	100%	0	86%	89%	%***
OES/JSA plus 2 or more other Trainings	0	1	9	1	81	92	N*
	$0	$189	$2,334	$552	$3,428	$2,999	$**
	0%	100%	78%	100%	94%	92%	%***
Column Total	17	9	53	3	419	501	N*
	$3,287	$3,187	$2,518	$2,257	$3,581	$3,439	$**
	71%	100%	83%	100%	84%	84%	%***

*N = number

**$ = Median earnings adjusted to 1997 Dollars, based on the employed population only.

***% = Percent employed

Table 5. Characteristics of salient cells from Title IIa 'During Only' population.

	Largest Median $ amount	Largest N	Total Concurrent Population
	Occupational Skills/Other	Occupational Skills/Workforce	N=244
Avg. Age	34	37	38
Male	8%	30%	31%
Non White	33%	35%	39%
Limited in English	17%	1%	11%
Lacks Work Experience	25%	32%	39%
Follow-up Employment	67%	68%	70%
Wage-match Employment	100%	90%	87%

Table 6. Characteristics of salient cells from Title IIa, 3 combined ('Before only', 'After only' and 'No college') populations.

	Largest Median $ amount	Largest N	3 Combined Total Population
	On-the-job Training/Basic Skills	On-the-job Training/No College	N=501
Avg. Age	36	35	35
Male	17%	65%	49%
Non White	17%	28%	33%
Limited in English	33%	8%	9%
Lacks Work Experience	50%	24%	35%
Follow-up Employment	50%	87%	82%
Wage-match Employed	67%	84%	84%

Table 7. Overall distribution of Title IIc participants by the JTPA & college Trainings.

	College Trainings						
JTPA Trainings	Basic Skills	Transfer	Workforce	Other	No College	Row Total	
Basic Skills	13	10	17	2	304	346	*N
	$1,575	$2,145	$1,415	$3,163	$1,275	$1,308	**$
	62%	70%	82%	50%	83%	81%	***%
Occupational Skills	2	1	11	0	49	63	*N
	$2,589	$4,647	$2,438	$0	$1,455	$1,705	**$
	100%	100%	91%	0%	84%	86%	***%
Basic & Occupational Skills	2	5	5	3	148	163	*N
	$359	$1,774	$1,027	$817	$981	$989	**$
	50%	100%	80%	33%	87%	87%	***%
Job Search	0	5	3	1	31	40	*N
	$0	$976	$4,392	$0	$2,132	$2,152	**$
	0%	100%	67%	0%	68%	70%	***%
Job Search & Another	4	5	12	1	44	66	*N
	$2,703	$1,552	$1,426	$3,170	$1,758	$1,758	**$
	75%	60%	75%	100%	91%	85%	***%
Column Total	21	26	48	7	576	* 678	*N
	$2,109	$1,841	$1,705	$3,163	$1,224	$1,282	**$
	67%	81%	81%	43%	84%	83%	***%

* 8 missing values

*N = number

**$ = Median earnings adjusted to 1997 dollars, for employed people only.

***% = Percent employed

Table 8. Cross-match of JTPA & college training for "During Only" population of Title IIc.

	College Trainings					
JTPA Trainings	Basic Skills	Transfer	Workforce	Other	Row Total	
Basic Skills	8	3	9	0	20	*N
	$2,209	$1,506	$1,823	$0	$2,009	**$
	63%	67%	89%	0%	75%	***%
Occupational Skills	0	1	10	0	11	*N
	$0	$4,647	$2,589	$0	$3,061	**$
	0%	100%	90%	0%	91%	***%
Basic & Occupational Skills	1	0	0	0	1	*N
	$359	$0	$0	$0	$359	**$
	100%	0%	0%	0%	100%	***%
Job Search	0	1	2	0	3	*N
	$0	$2,265	$4,392	$0	$2,957	**$
	0%	100%	100%	0%	100%	***%
Job Search & Another	4	5	8	1	18	*N
	$2,703	$1,552	$1,387	$3,170	$1,552	**$
	75%	60%	75%	100%	72%	***%
Column Total	13	10	29	1	53	*N
	$2,209	$1,841	$2,257	$3,170	$2,217	**$
	69%	70%	86%	100%	79%	***%

Table 9. Title IIc cross match of the two trainings for 3 combined ('Before only', 'After only' and 'No college').

	College Trainings						
JTPA Trainings	Basic Skills	Transfer	Workforce	Other	No College	Row Total	
Basic Skills	5	7	8	2	304	326	*N
	$329	$2,821	$1,079	$3,163	$1,275	$1,277	**$
	60%	71%	75%	50%	83%	82%	***%
Occupational Skills	2	0	1	0	49	52	*N
	$2,589	$0	$46	$0	$1,455	$1,478	**$
	100%	0%	100%	0%	84%	85%	***%
Basic & Occupational Skills	1	5	5	3	148	162	*N
	$0	$1,774	$1,027	$817	$981	$996	**$
	0%	100%	80%	33%	87%	87%	***%
Job Search	0	4	1	1	31	37	*N
	$0	$852	$0	$0	$2,132	$2,083	**$
	0%	100%	0%	0%	68%	70%	***%
Job Search & Another	0	0	4	0	44	48	*N
	$0	$0	$3,448	$0	$1,758	$1,825	**$
	0%	0%	75%	0%	91%	90%	***%
Column Total	8	16	19	6	576	* 625	*N
	$1,142	$1,959	$1,079	$1,990	$1,224	$1,253	**$
	63%	88%	74%	33%	84%	83%	***%

* = 8 missing values

*N = number
**$ = Median earnings adjusted to 1997 dollars for employed people only.
***% = Percent employed

Table 10. Characteristics of salient cells from Title IIc "During Only" time period.

	Largest N	Total Concurrent Population
	Occupational/Workforce	N=53
Avg. Age	20	19
Male	40%	43%
Non White	20%	34%
Limited in English	0%	4%
Lacks Work Experience	50%	72%
Follow-up Employment	100%	70%
Wage-match Employment	90%	79%

Table 11. Characteristics of salient cells from Title IIc, 3 combined (before only, after only and no college) groups.

	Largest Median $ amount	Largest N	3 Combined Total Population
	Job Search & Another/Workforce	Basic Skills /No College	N=633
Avg. Age	17	18	18
Male	0%	50%	47%
Non White	50%	40%	37%
Limited in English	0%	5%	5%
Lacks Work Experience	50%	77%	77%
Follow-up Employment	100%	49%	56%
Wage-match Employed	75%	83%	83%

Table 12. Title III, cross-match of JTPA & college training.

	College Trainings						
JTPA Trainings	Basic Skills	Transfer	Workforce	Other	No College	Row Total	
Basic Skills	9	1	26	1	13	50	*N
	$3,354	$5,697	$4,572	$4,001	$4,733	$4,676	**$
	78%	100%	69%	100%	69%	72%	***%
Occupational Skills	3	25	718	43	453	1242	*N
	$3,392	$4,302	$6,391	$6,469	$6,395	$6,372	**$
	67%	68%	84%	81%	75%	80%	***%
Basic & Occupational Skills	4	6	121	8	1	140	*N
	$10,087	$10,535	$884	$10,676	$0	$9,076	**$
	50%	50%	87%	75%	0%	83%	***%
Basic Readjustment Only	2	26	156	17	727	928	*N
	$1,555	$3,404	$4,751	$4,796	$6,637	$6,318	**$
	100%	62%	68%	47%	75%	73%	***%
Basic Readjustment & another	0	0	9	1	55	65	*N
	$0	$0	$2,052	$1,566	$3,822	$3,572	**$
	0%	0%	89%	100%	78%	80%	***%
Column Total	18	58	1030	70	1249	2425	*N
	$3,354	$4,302	$6,295	$6,455	$6,359	$6,319	**$
	72%	64%	82%	73%	75%	78%	***%

*N = number

**$ = Median earnings adjusted to 1997 dollars, for employed people only.

***% = Percent employed

Table 13. Title III cross-match of JTPA & college training for "During Only" population.

	College Trainings					
JTPA Trainings	Basic Skills	Transfer	Workforce	Other	Row Total	
Basic Skills	9	1	22	1	33	*N
	$3,354	$5,697	$5,209	$4,001	$4,386	**$
	78%	100%	68%	100%	73%	***%
Occupational Skills	1	19	680	41	741	*N
	$6,086	$4,188	$6,474	$7,027	$6,456	**$
	100%	74%	85%	80%	84%	***%
Basic & Occupational Skills	4	6	119	8	137	*N
	$10,087	$10,535	$8,884	$10,676	$9,076	**$
	50%	50%	88%	75%	85%	***%
Basic Readjustment Only	0	13	111	14	138	*N
	$0	$2,799	$5,096	$4,796	$4,996	**$
	0%	62%	68%	43%	64%	***%
Basic Readjustment & another	0	0	3	0	3	*N
	$0	$0	$2,526	$0	$2,526	**$
	0%	0%	100%	0%	100%	***%
Column Total	14	39	935	64	1052	*N
	$4,930	$4,666	$6,474	$6,548	$6,443	**$
	71%	67%	83%	72%	82%	***%

Table 14. Title III cross-match of JTPA & college training for 3 combined ('Before only', 'After only' and 'No college') groups.

	College Trainings						
JTPA Trainings	Basic Skills	Transfer	Workforce	Other	No College	Row Total	
Basic Skills	0	0	4	0	13	17	*N
	$0	$0	$3,187	$0	$4,733	$4,676	**$
	0%	0%	75%	0%	69%	71%	***%
Occupational Skills	2	6	38	2	453	501	*N
	$700	$5,557	$1,573	$1,695	$6,395	$6,268	**$
	50%	50%	71%	100%	75%	74%	***%
Basic & Occupational Skills	0	0	2	0	1	3	*N
	$0	$0	$0	$0	$0	$0	**$
	0%	0%	0%	0%	0%	0%	***%
Basic Readjustment Only	2	13	45	3	727	790	*N
	$1,555	$3,628	$3,835	$2,252	$6,637	$6,372	**$
	100%	62%	69%	67%	75%	75%	***%
Basic Readjustment & another	0	0	6	1	55	62	*N
	$0	$0	$1,578	$1,566	$3,822	$3,671	**$
	0%	0%	83%	100%	78%	79%	***%
Column Total	4	19	95	6	1249	1373	*N
	$700	$3,842	$2,909	$2,029	$6,359	$6,205	**$
	75%	58%	69%	83%	75%	74%	***%

*N = number

**$ = Median earnings adjusted to 1997 dollars for employed people only.

***% = Percent employed

Table 15. Characteristics of salient cells from Title III "During Only" time period.

	Largest Median $ amount	Largest N	Total Concurrent Population
	Basic & Occupational/Other	Occupational/Workforce	N=1052
Avg. Age	42	40	40
Male	25%	66%	66%
Non White	38%	14%	14%
Limited in English	25%	1%	2%
Lacks Work Experience	0%	1%	1%
Follow-up Employment	25%	64%	63%
Wage-match Employment	75%	85%	82%

Table 16. Characteristics of salient cells from Title III, 3 combined ('Before only', 'After only' and 'No college') populations.

	Largest Median $ & N	3 Combined Total Population
	Basic Readjustment/No College	N=1373
Avg. Age	42	41
Male	65%	68%
Non White	15%	13%
Limited in English	0%	1%
Lacks Work Experience	0%	1%
Follow-up Employment	69%	72%
Wage-match Employed	75%	74%